

1 SYNCHRONIZED MULTI-OUTPUT DIGITAL CLOCK MANAGER
2

3 John D. Logue

4 Andrew K. Percey

5 F. Erich Goetting

6

7

8 ABSTRACT OF THE DISCLOSURE

9 A digital clock manager is provided. The digital clock
10 manager generates an output clock signal that causes a
11 skewed clock signal to be synchronized with a reference
12 clock signal. Furthermore, the digital clock manager
13 generates a frequency adjusted clock signal that is
14 synchronized with the output clock signal during concurrence
15 periods. The digital clock manager includes a delay lock
16 loop and a digital frequency synthesizer. The delay lock
17 loop generates a synchronizing clock signal that is provided
18 to the digital frequency synthesizer. The output clock
19 signal lags the synchronizing clock signal by a DLL output
20 delay. Similarly, the frequency adjusted clock signal lags
21 the synchronizing clock signal by a DFS output delay. By
22 matching the DLL output delay to the DFS output delay, the
23 digital clock manager synchronizes the output clock signal
24 and the frequency adjusted clock signal.